

CLAIMS

What is claimed is:

1. A method for responding to a client request, the method comprising the steps of:
5 synchronizing a plurality of servers;
 receiving a client request from the client to access a server of the plurality
 of servers;
 generating a transmit identifier associated with the client request, the
 transmit identifier identifying an event upon the occurrence of which the plurality
10 of synchronized servers each transmit a response to the client; and
 forwarding the client request and the transmit identifier to each of the
 plurality of synchronized servers.
2. The method of claim 1 wherein the step of synchronizing comprises the steps of:
15 synchronizing a clock mechanism in each of the plurality of servers.
3. The method of claim 1 wherein the step of generating the transmit identifier
 comprises the steps of:
 obtaining a timestamp associated with the client request,
20 adding a predetermined delay to the timestamp to produce the transmit
 identifier; and
 associating the transmit identifier with the client request.
4. The method of claim 3 wherein the step of associating the transmit identifier
25 comprises the step of:
 combining the transmit identifier into the client request.
5. The method of claim 3 wherein the step of obtaining the timestamp is performed
 upon receipt of the client request.

6. The method of claim 3 wherein the client request is received in a request queue,
and wherein the step of obtaining the timestamp is performed at a time of
processing the client request from the request queue.
- 5 7. The method of claim 3 wherein the transmit identifier identifies the event
indicating a future time within each of the plurality of servers at which each of the
plurality of servers responds to the client request; and
wherein the future time is related to a predetermined delay associated with
10 at least one of the plurality of servers.
8. The method of claim 7 wherein the predetermined delay is greater than a
maximum transmission delay for transmission of the client request to one of the
plurality of servers from a master server.
- 15 9. The method of claim 7 wherein the predetermined delay is less than or equal to a
maximum transmission delay for transmission of the client request to one of the
plurality of servers from a master server.
- 20 10. A method for responding to a client request, the method comprising the steps of:
receiving a client request associated with a client and receiving a transmit
identifier identifying an event;
generating a response to the client request; and
transmitting the response to the client upon an occurrence of the event
25 identified by the transmit identifier.
11. The method of claim 11 further including the step of:
accepting a time synchronization signal; and
synchronizing a clock based on the synchronization signal.

12. A master server for handling content requests comprising:
- a memory;
 - a communications interface;
 - 5 a processor; and
 - an interconnection mechanism coupling the memory, the processor and the communications interface;
- wherein the memory is encoded with a request handler application that when performed on the processor, produces a request handler process that causes
- 10 the master server to provide a client request and transmit identifier in response to a client request such that the processor is configured to:
- synchronize a plurality of servers;
 - receive a client request from the client to access a server of the plurality of servers;
 - 15 generate a transmit identifier associated with the client request, the transmit identifier identifying an event upon the occurrence of which the plurality of synchronized servers each transmit a response to the client;
 - and
 - forward the client request and the transmit identifier to each of the
 - 20 plurality of synchronized servers.
13. The master server of claim 12 wherein, to synchronize a plurality of servers, the master server is configured to:
- synchronize a clock mechanism in each of the plurality of servers.
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14. The master server of claim 12 wherein, to generate the transmit identifier, the master server is configured to:
- obtain a timestamp associated with the client request;

add a predetermined delay to the timestamp to produce the transmit identifier; and

associate the transmit identifier with the client request.

- 5 15. The master server of claim 14 wherein, to associate the transmit identifier, the master server is configured to:

combine the transmit identifier into the client request.

- 10 16. The master server of claim 14 wherein the master server is configured to obtain the timestamp upon receipt of the client request.

- 15 17. The master server of claim 14 wherein the master server is configured such that the client request is received in a request queue, and wherein the master server obtains the timestamp at a time of processing the client request from the request queue.

- 20 18. The master server of claim 14 wherein the master server is configured such that the transmit identifier identifies the event indicating a future time within each of the plurality of servers at which each of the plurality of servers responds to the client request; and

wherein the future time is related to a predetermined delay associated with at least one of the plurality of servers.

- 25 19. The master server of claim 14 wherein the master server is configured such that the predetermined delay is greater than a maximum transmission delay for transmission of the client request to one of the plurality of servers from a master server.

20. The master server of claim 14 wherein the master server is configured such that the predetermined delay is less than or equal to a maximum transmission delay for transmission of the client request to one of the plurality of servers from a master server.

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21. A slave server for handling content requests comprising:

a memory;

a communications interface;

a processor; and

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an interconnection mechanism coupling the memory, the processor and the communications interface;

wherein the memory is encoded with a request agent application that when performed on the processor, produces a request agent process that causes the slave server to provide content to a client, in response to a client request and a transmit identifier, such that the processor is configured to:

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receive a client request associated with a client and receiving a transmit identifier identifying an event;

generate a response to the client request; and

transmit the response to the client upon an occurrence of the event identified by the transmit identifier.

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22. The slave server of claim 21 wherein, the slave server is further configured to:
accept a time synchronization signal; and
synchronize a clock based on the synchronization signal.

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23. A system for identifying a server that provides the fastest response to a client request comprising:

a master server, which is configured to (i) receive a client request from the client to access a server of a plurality of slave servers, (ii) generate a transmit

identifier associated with the client request, the transmit identifier identifying an event upon the occurrence of which the plurality of synchronized servers each transmit a response to the client and (iii) forward the client request and the transmit identifier to each of the plurality of synchronized servers;

- 5 a slave server, which is configured to (i) receive a client request associated with a client and receive a transmit identifier identifying an event (ii) generate a response to the client request, and transmit the response to the client upon an occurrence of the event identified by the transmit identifier.

- 10 24. A computer program product having a computer-readable medium including computer program logic encoded thereon that, when performed on a processor in a computerized device having a coupling of a memory, a processor, and at least one communications interface provides a method for providing a response to a client request by performing the operations of:

- 15 synchronizing a plurality of servers;
 receiving a client request from the client to access a server of the plurality of servers;

- generating a transmit identifier associated with the client request, the transmit identifier identifying an event upon the occurrence of which the plurality
 20 of synchronized servers each transmit a response to the client; and

 forwarding the client request and the transmit identifier to each of the plurality of synchronized servers.

- 25 25. An apparatus for responding to a client request comprising:
 a memory;
 a communications interface;
 a processor; and
 an interconnection mechanism coupling the memory, the processor and the communications interface;

wherein the memory is encoded with a request handler application that when performed on the processor, produces a means to enable the client request and transmit identifier to be forwarded to at least one slave server, such means including:

- 5 means for synchronizing a plurality of servers;
- means for receiving a client request from the client to access a server of the plurality of servers;
- means for generating a transmit identifier associated with the client request, the transmit identifier identifying an event upon the occurrence of which
- 10 the plurality of synchronized servers each transmit a response to the client; and
- means for forwarding the client request and the transmit identifier to each of the plurality of synchronized servers.

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